

Directorate Network Management Monthly Network Operations Report

Analysis – November 2012



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NOTICE:

All figures presented in this report are for the geographical area that is within Network Manager's responsibility (NM area). See ACC coverage on page 3.



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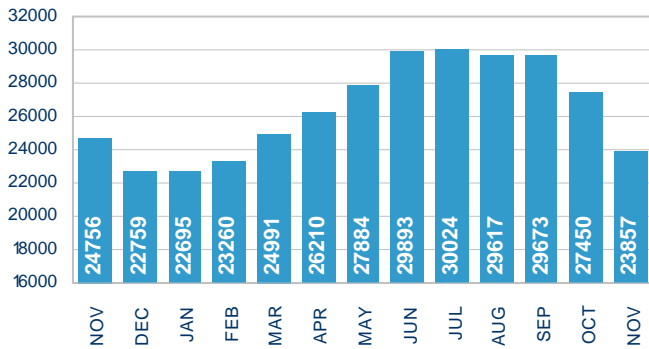
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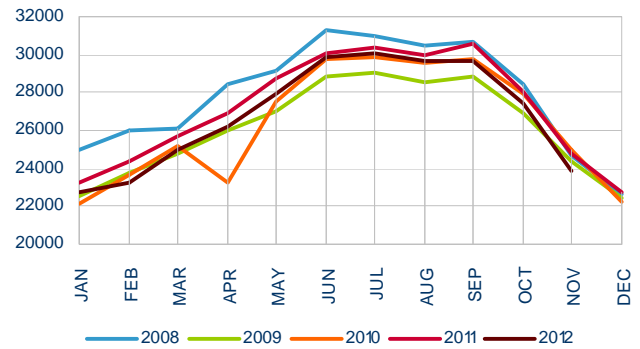
1. TOTAL TRAFFIC

Last 13 months average daily traffic



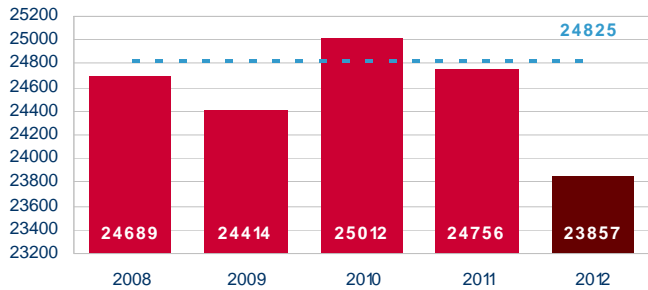
Traffic decreased by 3.6% compared to November 2011.

Average daily traffic for last 5 Years



Traffic in November 2012 was the lowest level for the last five years.

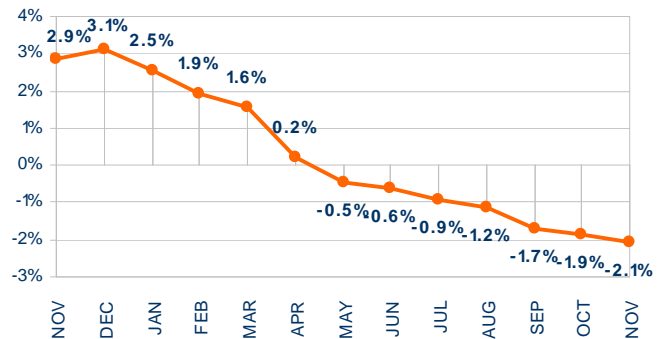
Average daily traffic in November for last 5 Years
forecast date : 2012-09



November 2012 traffic was significantly below the forecast due to:

- some further downward revisions in the economic outlook
- the (start of the) Winter schedule saw much more capacity cuts than expected
- the European-wide general strike during Week 46 hindered traffic growth

12 months rolling traffic trend



This graph shows the variation in total traffic for the last 12-month period relative to that for the 12-month period before. The total traffic from December 2011 to November 2012 decreased by 2.1% relative to that from December 2010 to November 2011.

Eight of the top 10 airports had less traffic compared to November 2011 (Paris CDG, Frankfurt, London Heathrow, Amsterdam, Munich, Madrid Barajas, Rome Fiumicino and Vienna). Traffic increased at Oslo Gardermoen and Istanbul Ataturk airports.

Traffic decreased at Athens airport by 14.4%. The largest decrease was at Las Palmas airport (-17.1%) as a result of Islas Airways ceasing operations on 16 October 2012. The 17% traffic decrease at Madrid Barajas airport is the result of overall traffic reduction in Spain in conjunction with Spanair cessation of operations in January 2012. The decrease at Budapest Ferihegy (-16.1 %) airport was a result of Malév Hungarian Airlines ceasing operations in February 2012.

The largest traffic increases were at Istanbul Ataturk (+11.1 %), Tel Aviv (+7.1%), Istanbul Sabiha (+6 %) and Dublin (+5.8 %) airports.

With the exception of Lufthansa, Air France, Air Berlin and Alitalia, the traffic for the top 10 air operators (Ryanair, Easyjet, Turkish Airlines, SAS and KLM) increased in November 2012 compared to November 2011.

Airline consolidation and restructuring explains most of the significant traffic decreases and increases: Air Nostrum (-36.6%) and Finnair (-33.8%), United Airlines (+129.4%), Finnish Commuter Airlines (+39.6%) and BAW shuttle (+25.3% due to the cessation of BMLbaby operations in September).

Aeroflot Russian (+18.8 %) recorded a real traffic growth.

“Unidentified operators” (mainly General Aviation) decreased by 2.1% in November 2012.

N°	ADEP	ADEP NAME	201211	%
1	LFPG	PARIS CD DE GAULLE	647	-2.4%
2	EDDF	FRANKFURT MAIN	638	-4.6%
3	EGLL	LONDON/HEATHROW	628	-1.7%
4	EHAM	SCHIPHOL AMSTERDAM	549	-0.7%
5	EDDM	MUENCHEN 2	527	-3.3%
6	LTBA	ISTANBUL-ATATURK	490	11.1%
7	LEMD	MADRID BARAJAS	459	-17.0%
8	LIRF	ROME FIUMICINO	381	-6.2%
9	LOWW	WIEN SCHWECHAT	347	-2.3%
10	ENGM	OSLO/GARDERMOEN	340	2.7%
11	EKCH	COPENHAGEN KASTRUP	339	-1.7%
12	LSZH	ZURICH	334	-4.3%
13	LEBL	BARCELONA	332	-12.2%
14	ESSA	STOCKHOLM-ARLANDA	311	0.0%
15	LFPO	PARIS ORLY	309	0.7%
16	EBBR	BRUSSELS NATIONAL	282	-4.7%
17	EDDL	DUESSELDORF	280	-6.4%
18	EGKK	LONDON/GATWICK	275	-1.4%
19	EDDT	TEGEL-BERLIN	239	3.5%
20	EFHK	HELSINKI-VANTAA	238	-7.8%
21	LSGG	GENEVE COINTRIN	218	2.8%
22	LIMC	MILANO MALPENSA	210	-6.7%
23	EGCC	MANCHESTER	201	-0.5%
24	EIDW	DUBLIN	201	5.8%
25	EDDH	HAMBURG	189	-7.8%
26	LPPT	LISBOA	173	3.0%
27	EGSS	LONDON/STANSTED	168	1.2%
28	EPWA	WARSAWA/OKECIE	167	-4.0%
29	LGAV	ATHINA/ELEFTHERIOS VENIZELOS	160	-14.4%
30	LTJF	ISTANBUL-SABIHA	158	6.0%
31	LKPR	PRAHA RUZYNE	157	-9.8%
32	LIML	MILANO LINATE	156	-1.3%
33	EDDS	STUTT GART	154	-7.8%
34	LFLL	LYON SATOLAS	154	-3.8%
35	EDDK	KOELN-BONN	150	-11.2%
36	LFMN	NICE	148	2.1%
37	LFML	MARSEILLE PROVENCE	137	-0.7%
38	GCLP	LAS PALMAS	136	-17.1%
39	ENBR	BERGEN/FLESAND	135	-3.6%
40	EGPH	EDINBURGH	132	-4.4%
41	LFBO	TOULOUSE BLAGNAC	130	4.0%
42	LTAI	ANTALYA	122	-2.4%
43	EGGW	LONDON/LUTON	115	1.8%
44	LHBP	FERIHEGY-BUDAPEST	115	-16.1%
45	LROP	OTOPENI/INTL	115	0.0%
46	LEPA	PALMA DE MALLORCA	114	-12.3%
47	ENZY	STAVANGER/SOLA	114	0.0%
48	LTAC	ANKARA-ESENBOGA	110	0.0%
49	EGBB	BIRMINGHAM	109	1.9%
50	LLBG	TEL AVIV/BEN GURION	105	7.1%
TOTALS and % TOTAL TRAFFIC			12398	52.0%

Top 50 Departure Airports with average daily traffic and percentage compared to same period of previous year

N°	ICAO	AIR OPERATOR	201211	%
1	DLH	DEUTSCHE LUFTHANSA	1760	-5.1%
2	RFR	RYANAIR	1086	4.0%
3	AFR	AIR FRANCE	1026	-1.3%
4	SAS	S.A.S	884	16.0%
5	EZY	EASYJET	849	4.0%
6	THY	TURKISH AIRLINES	837	14.8%
7	BAW	BRITISH AIRWAYS	623	12.5%
8	KLM	KLM ROYAL DUTCH AIRL	567	1.3%
9	BER	AIR BERLIN, INC.	481	-3.6%
10	AZA	ALITALIA	460	-8.7%
11	SWR	SWISS INTERNATIONAL	401	-1.7%
12	NAX	NORWEGIAN AIR SHUTTLE	395	7.6%
13	WIF	WIDEROE	362	11.0%
14	BEE	JERSEY EUROPEAN T/A FLYBE	356	1.1%
15	AUA	AUSTRIAN AIRLINES	342	-1.4%
16	TAP	TAP/AIR PORTUGAL	255	0.8%
17	IBE	IBERIA	240	-25.7%
18	VLG	VUELING AIRLINES SA	238	16.1%
19	ANE	AIR NOSTRUM	227	-36.6%
20	PGT	PEGASUS HAVA TASI	225	13.1%
21	AFL	AEROFLOT-RUSSIAN	221	18.8%
22	LOT	LOT-POLISH AIRLINES	210	2.9%
23	BEL	BRUSSELS AIRLINES	193	-4.0%
24	WZZ	WIZZ AIR	177	0.6%
25	EIN	AER LINGUS TEORANTA	176	2.3%
26	FCM	FINNISH COMMUTER AIRLINES OY/F	167	36.9%
27	GWI	GERMAN WINGS	153	-9.5%
28	AEA	AIR EUROPA	152	0.7%
29	RAM	ROYAL AIR MAROC	148	-3.9%
30	FIN	FINNAIR OY	135	-33.8%
31	UAE	EMIRATES	133	14.7%
32	BCS	EUROPEAN AIR TRANSP.	121	5.2%
33	SHT	BAW SHUTTLE	119	25.3%
34	UAL	UNITED AIRLINES INC.	117	129.4%
35	OAL	OLYMPIC	111	-18.4%
36	CSA	CZECH AIRLINES	109	-21.6%
37	BTI	AIR BALTIC CORPORAT.	107	-6.1%
38	EZS	EASY JET SWITZERLAND	105	11.7%
39	NJE	NETJETS	103	-4.6%
40	SXS	SUNEXPRESS AIRLINES	101	-19.2%
41	LOG	LOGANAIR	100	13.6%
42	AEE	AEGEAN AIRLINES	99	-16.1%
43	DAL	DELTA AIR LINES INC.	96	-7.7%
44	EZE	EASTERN AIRWAYS UK	94	0.0%
45	QTR	QATAR AIRWAYS COMP.	93	9.4%
46	ROT	TAROM	92	-4.2%
47	NAY	NAYSA	92	-14.8%
48	BZH	BRITAIR S.A.	91	-9.9%
49	TOM	THOMSON FLY LTD	89	9.9%
50	BCY	CITYJET	89	-12.8%
TOTALS and % TOTAL TRAFFIC			15407	64.6%

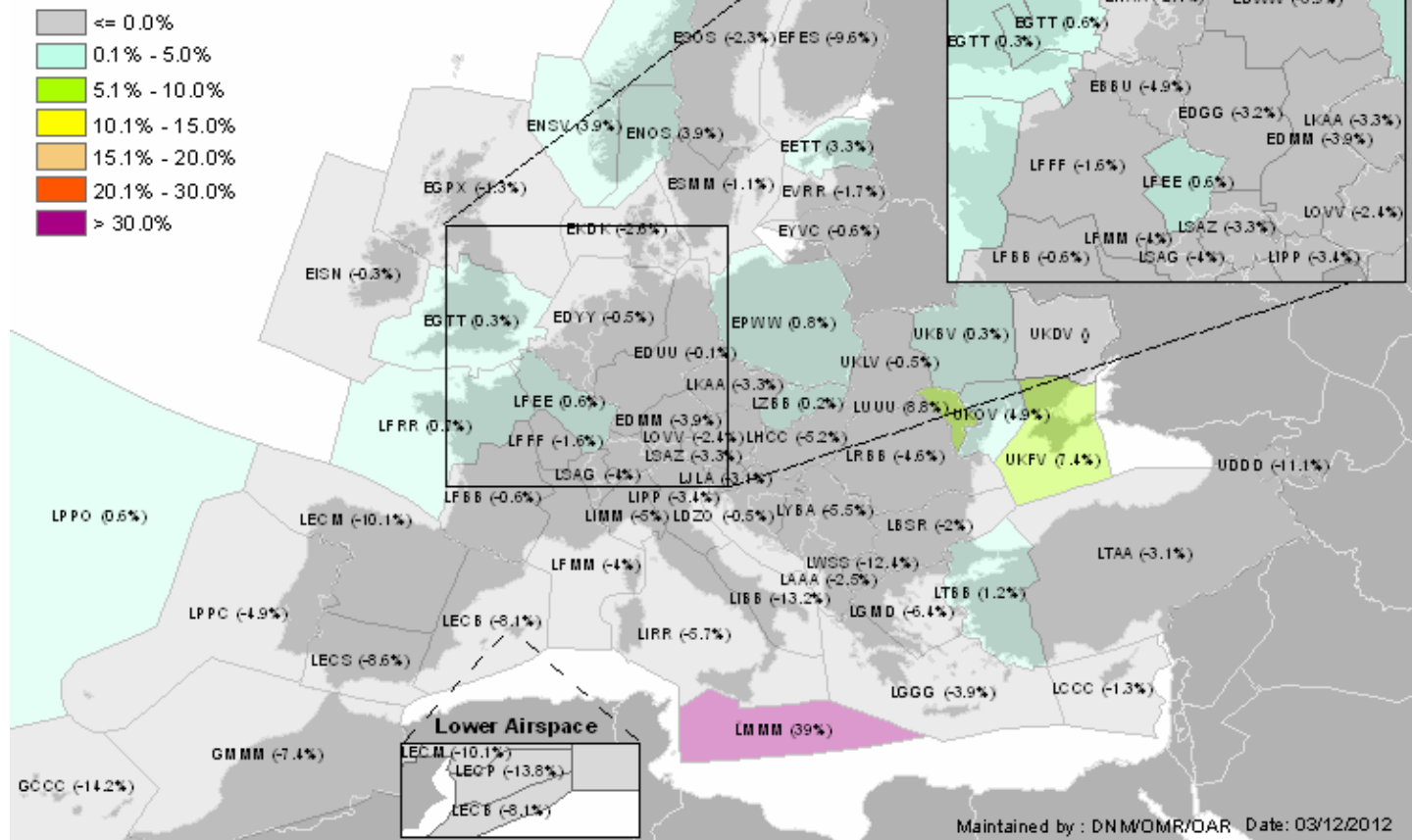
Top 50 Air Operators with average daily traffic and percentage compared to same period of previous year

N°	ICAO	AIR OPERATOR	201211	%
		Unidentified	2250	-2.1%

Average daily traffic and percentage compared to same period of previous year for all flights where Air Operators can't be identified

EN-ROUTE TRAFFIC GROWTH

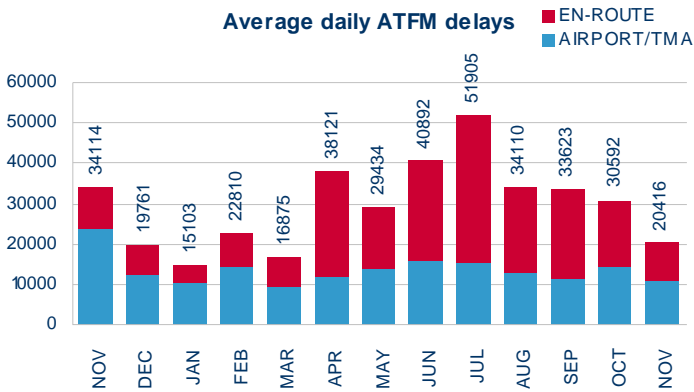
Percentage increase in traffic during November 2012 compared to the same month last year



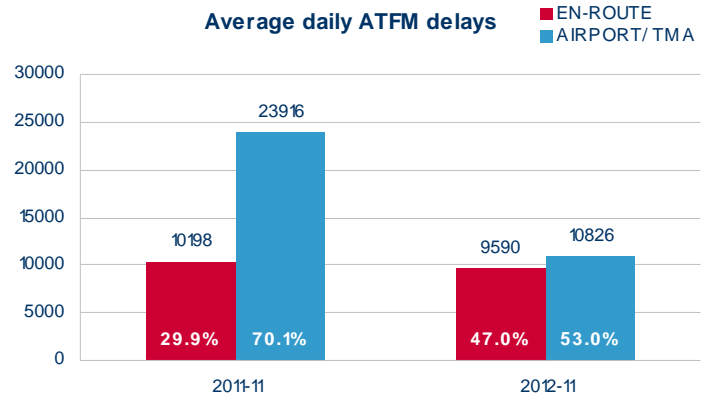
N°	ASP ID	ASP NAME	201211	%	N°	ASP ID	ASP NAME	201211	%
1	EBBUACC	BRUSSELS CANAC	1350	-4.9%	35	LFBBALL	BORDEAUX ALL ACC	1842	-0.6%
2	EDGGALL	LANGEN ACC	3208	-3.2%	36	LFEACC	REIMS UIACC	2015	0.6%
3	EDMMACC	MUNCHEN ACC	3541	-3.9%	37	LFFFALL	PARIS ALL ACC	2937	-1.6%
4	EDUUUAC	KARLSRUHE UAC	3450	-0.1%	38	LFMMAcc	MARSEILLE ACC	2135	-4.0%
5	EDWVACC	BREMEN ACC	1610	-3.9%	39	LFRRACC	BREST UIACC	1928	0.7%
6	EDYYUAC	MAASTRICHT UAC	4007	-0.5%	40	LGGGACC	ATHINA CONTROL	879	-3.9%
7	EETTACC	TALLIN ACC	451	3.3%	41	LGMDAcc	MAKEDONIA CONTROL	658	-6.4%
8	EFESACC	TAMPERE ACC	488	-9.6%	42	LHCCACC	BUDAPEST ACC	1245	-5.2%
9	EGGXOCA	SHANWICK OACC	944	-3.4%	43	LIBBACC	BRINDISI ACC	590	-13.2%
10	EGPXALL	SCOTTISH ACC	2155	-1.3%	44	LIMMAcc	MILANO ACC	1406	-5.0%
11	EGTTACC	LONDON ACC	4255	0.3%	45	LIPPAcc	PADOVA ACC	1429	-3.4%
12	EGTTTC	LONDON TMA TC	3071	0.6%	46	LIRRAcc	ROMA ACC	2014	-5.7%
13	EHAAACC	AMSTERDAM ACC(245-)	1290	-2.1%	47	LJLAACC	LJUBLJANA ACC	548	-3.1%
14	EIDWACC	DUBLIN ACC	437	4.9%	48	LKAAACC	PRAGUE ACC	1569	-3.3%
15	EISNACC	SHANNON ACC	927	-0.3%	49	LMMMAcc	MALTA ACC	263	39.0%
16	EKDKACC	COPENHAGEN ACC	1362	-2.6%	50	LOVVACC	WIEN ACC	1635	-2.4%
17	ENBDACC	BODO ACC	573	1.4%	51	LPPCAcc	LISBOA ACC/UAC	969	-4.9%
18	ENOSACC	OSLO ATCC	918	3.9%	52	LPPOACC	SANTA MARIA DACC	275	0.6%
19	ENSVACC	STAVANGER ATCC	641	3.9%	53	LRBBACC	BUCURESTI ACC	1084	-4.6%
20	EPWVACC	WARSZAWA ACC	1606	0.8%	54	LSAGACC	GENEVA ACC	1339	-4.0%
21	ESMMAcc	MALMO ACC	1322	-1.1%	55	LSAZACC	ZURICH ACC	1752	-3.3%
22	ESOSACC	STOCKHOLM ACC	1112	-2.3%	56	LTAACC	ANKARA ACC	1742	-3.1%
23	EVRRAcc	RIGA ACC	564	-1.7%	57	LTBBACC	ISTANBUL ACC	1783	1.2%
24	EYVCAcc	VILNIUS ACC	489	-0.6%	58	LUUUACC	CHISINAU ACC	154	8.8%
25	GCCCACC	CANARIAS ACC/FIC	726	-14.2%	59	LWSSACC	SKOPJE ACC	184	-12.4%
26	GMMMACC	CASABLANCA ACC	868	-7.4%	60	LYBAACC	BEOGRADE ACC	1068	-5.5%
27	LAAAACC	TIRANA ACC	412	-2.5%	61	LZBBACC	BRATISLAVA ACC	820	0.2%
28	LBSRAcc	SOFIA ACC	1086	-2.0%	62	UDDDACC	YEREVAN ACC	140	-11.1%
29	LCCCAcc	NICOSIA ACC	697	-1.3%	63	UKBVACC	KIEV ACC	574	0.3%
30	LDZACC	ZAGREB ACC	934	-0.5%	64	UKDVACC	DNIPROPETROVSK ACC	415	9.5%
31	LECBACC	BARCELONA ACC	1404	-8.1%	65	UKFYACC	SIMFEROPOL ACC	512	7.4%
32	LECMALL	MADRID ALL ACC	2209	-10.1%	66	UKLVACC	L'VIV ACC	430	-0.5%
33	LECPACC	PALMA ACC	292	-13.8%	67	UKOVACC	ODESSA ACC	235	4.9%
34	LECSACC	SEVILLA ACC	782	-8.6%					

Traffic increased significantly at Dnipropetrovsk, Chisinau, Simferopol, Dublin and Odessa ACCs. Malta recorded an increase of 39% compared to November 2011 as a recovery from last year's Libyan airspace closure. Traffic decreased significantly in Spanish (Canarias, Palma, Madrid, Seville and Barcelona), Brindisi, Skopje, Tampere, Yerevan and Casablanca ACCs.

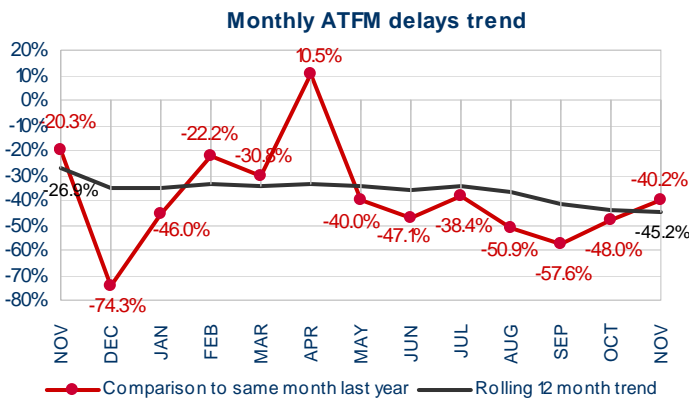
2. ATFM DELAY AND ATTRIBUTIONS



The average daily ATFM delays decreased from 34114 mins in November 2011 to 20416 mins in November 2012.

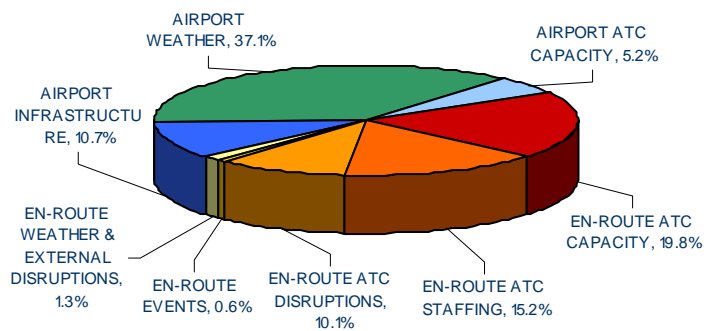


Compared to November 2011, ATFM delays decreased by 40.2% in November 2012. The main reduction was at airports, particularly at Amsterdam, Munich, London Heathrow and Vienna airports.

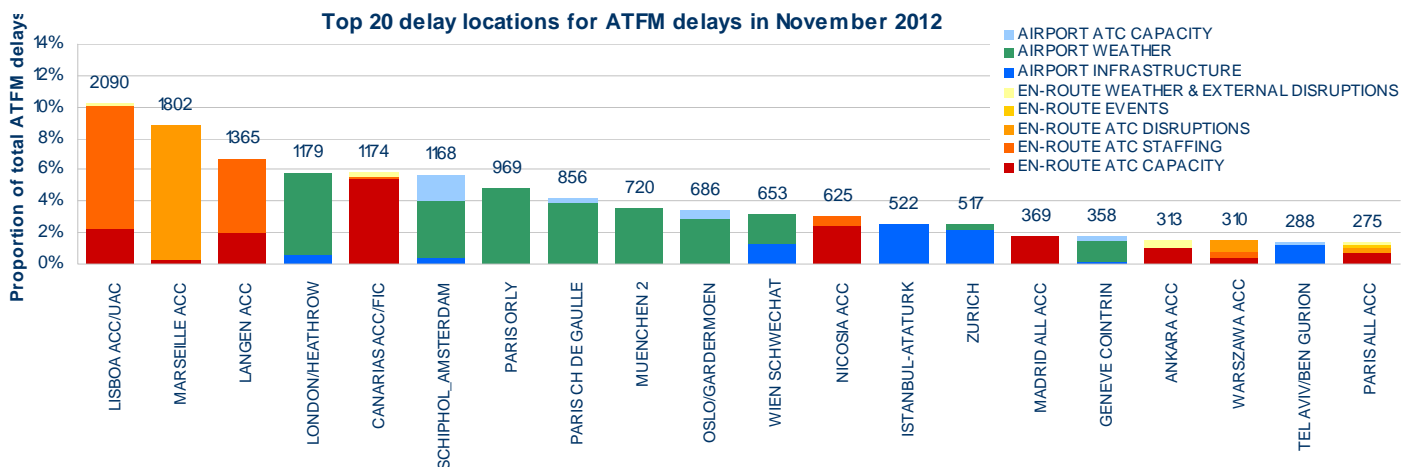


ATFM delays continue to decline. The 12 month trend has been -38% to -58% since May 2012.

Proportion of ATFM delay in November 2012



In November, 47% of all ATFM delay was en-route while the remaining 53% occurred at the Airports/TMA. En-route ATC capacity, staffing and disruptions accounted for 45.1% of all ATFM delays.

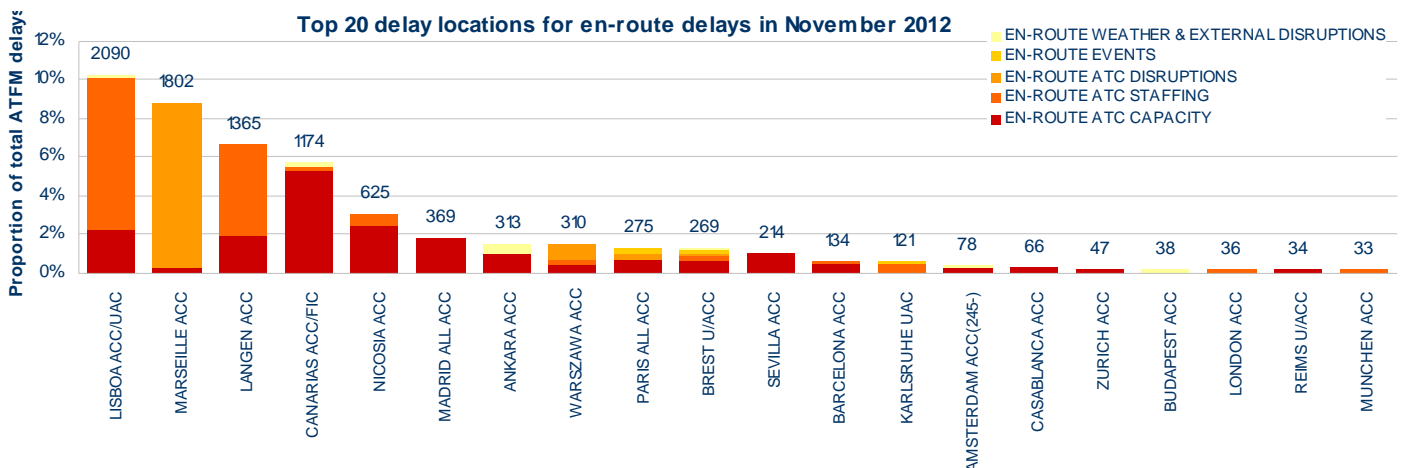
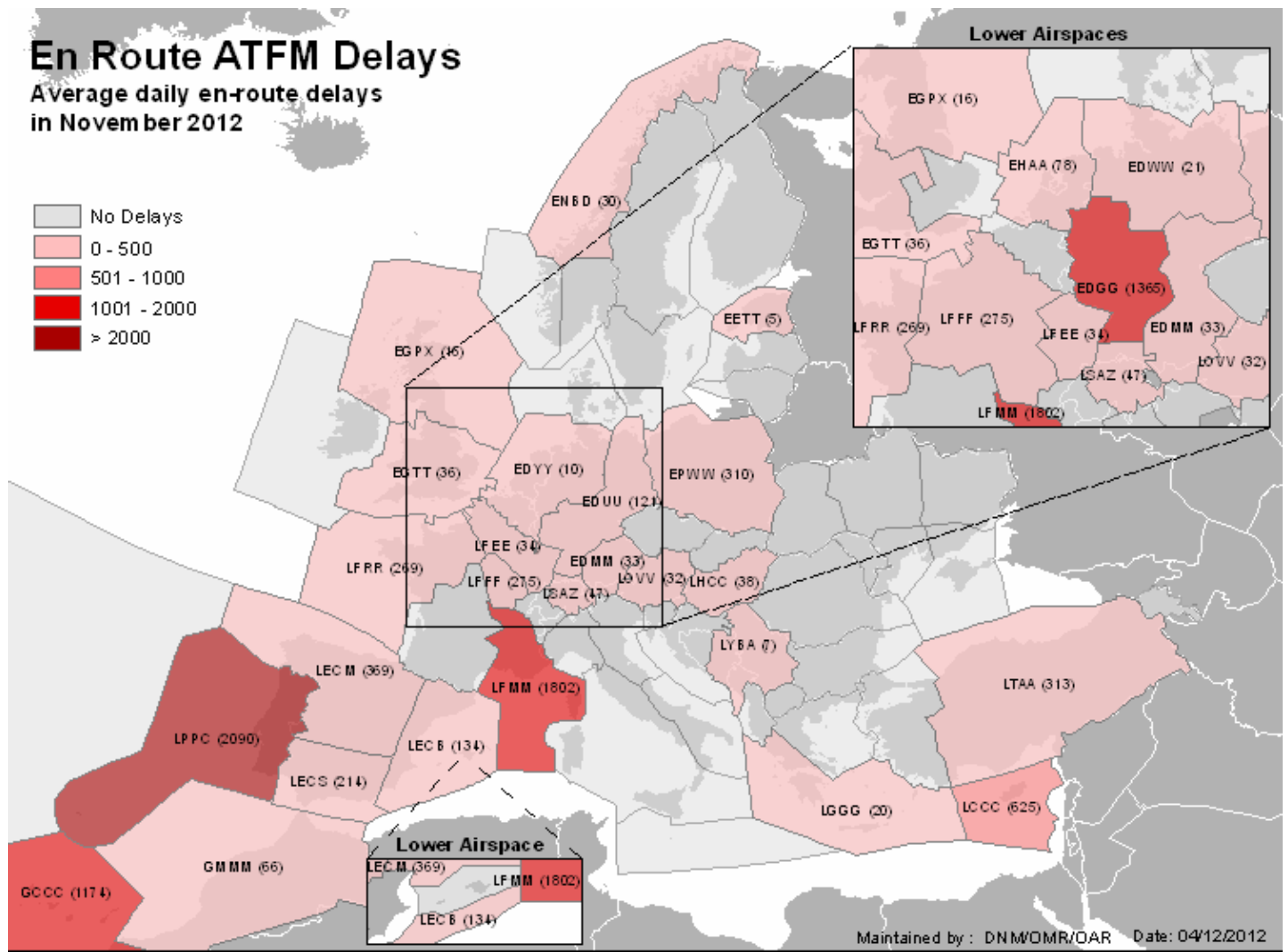


These are the top 20 delay generating locations for the reporting month. Figures are the average daily delays in minutes.

- Lisbon ACC recorded the highest delays in November due to en-route ATC Staffing and associated capacity issues.
- Marseille ACC delays were due to the industrial action that took place on Thursday 15 November 2012.
- Langen ACC continues to be affected by ATC staffing and capacity issues.
- Runway configuration at Canarias island airports due to southerly winds caused delays at Canarias ACC.
- London/Heathrow, Amsterdam, Paris Orly, Paris CDG, Munich, Oslo, Vienna and Geneva airports were affected by seasonal weather throughout the month with low visibility, fog, wind and snow issues.
- Nicosia, Madrid, Ankara and Paris ACCs recorded delays mainly due to ATC capacity issues.
- The limited use of the optimum runway configurations at Zurich airport (due to environmental constraints) and at Istanbul Ataturk airport (due southerly winds) continued to cause delays.
- Runway configuration at Tel Aviv/Ben Gurion airport during the recent security situation caused delay at the airport with knock on effect at Nicosia ACC.

3. EN-ROUTE ATFM DELAYS

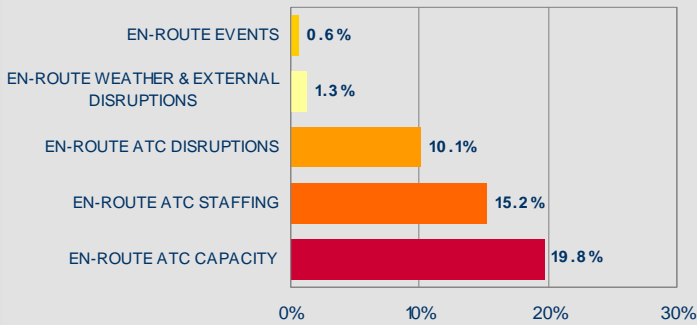
3.1. EN-ROUTE ATFM DELAY PER LOCATION



The top 20 en-route delay locations generated **46%** of the monthly total (network) ATFM delay.
The top 5 en-route delay locations generated **34.6%** of the monthly total (network) ATFM delay.

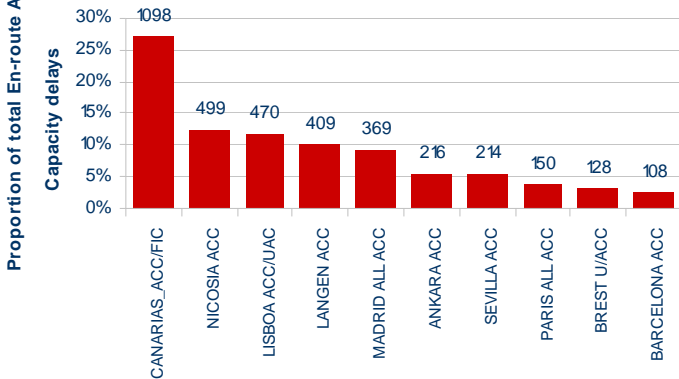
3.2. EN-ROUTE ATFM DELAY PER DELAY GROUP

Reasons for en-route delays in November 2012



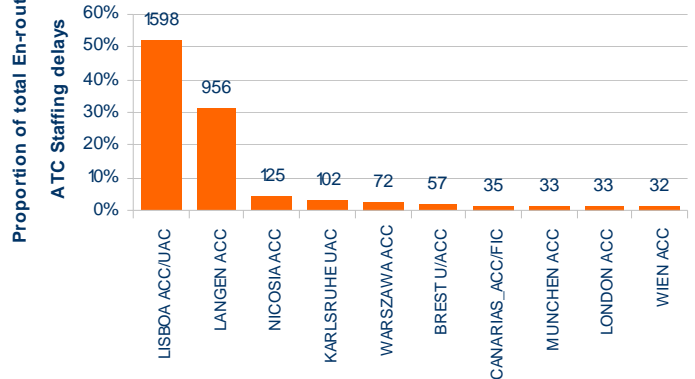
En-route delays accounted for 47% of all ATFM delays. 19.8% were attributed to en-route ATC capacity, 15.2% to en-route ATC staffing, 10.1% to en-route ATC disruptions, 1.3% to en-route weather and external disruptions and 0.6% to en-route events.

Top 10 delay locations for en-route ATC Capacity in November 2012



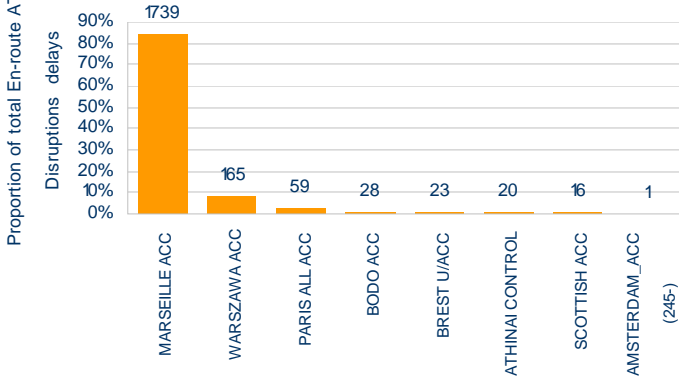
Compared to October 2012, ATC capacity delays decreased significantly with the exception of Canarias ACC. Traffic rerouted to avoid Lisbon ACC created some delay for Seville and Madrid ACCs.

Top delay locations for en-route ATC Staffing in November 2012



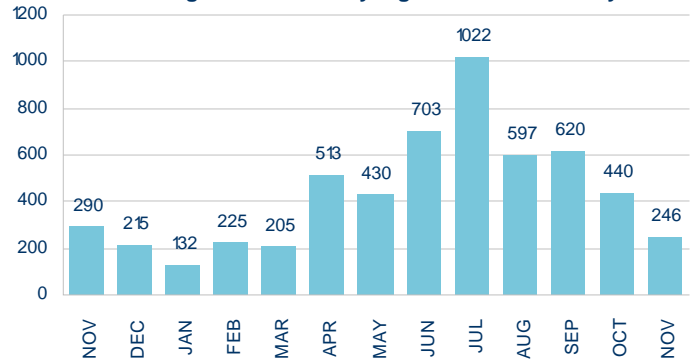
Compared to October 2012, ATC Staffing delays showed a significant decrease. A slight increase was observed in Lisbon ACC.

Top delay locations for en-route ATC Disruptions in November 2012



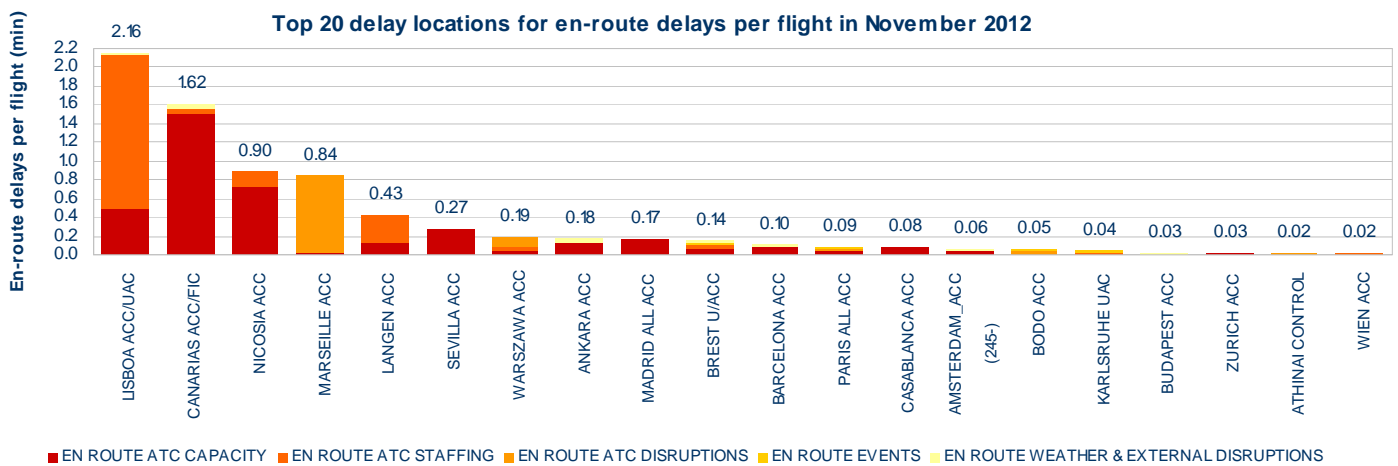
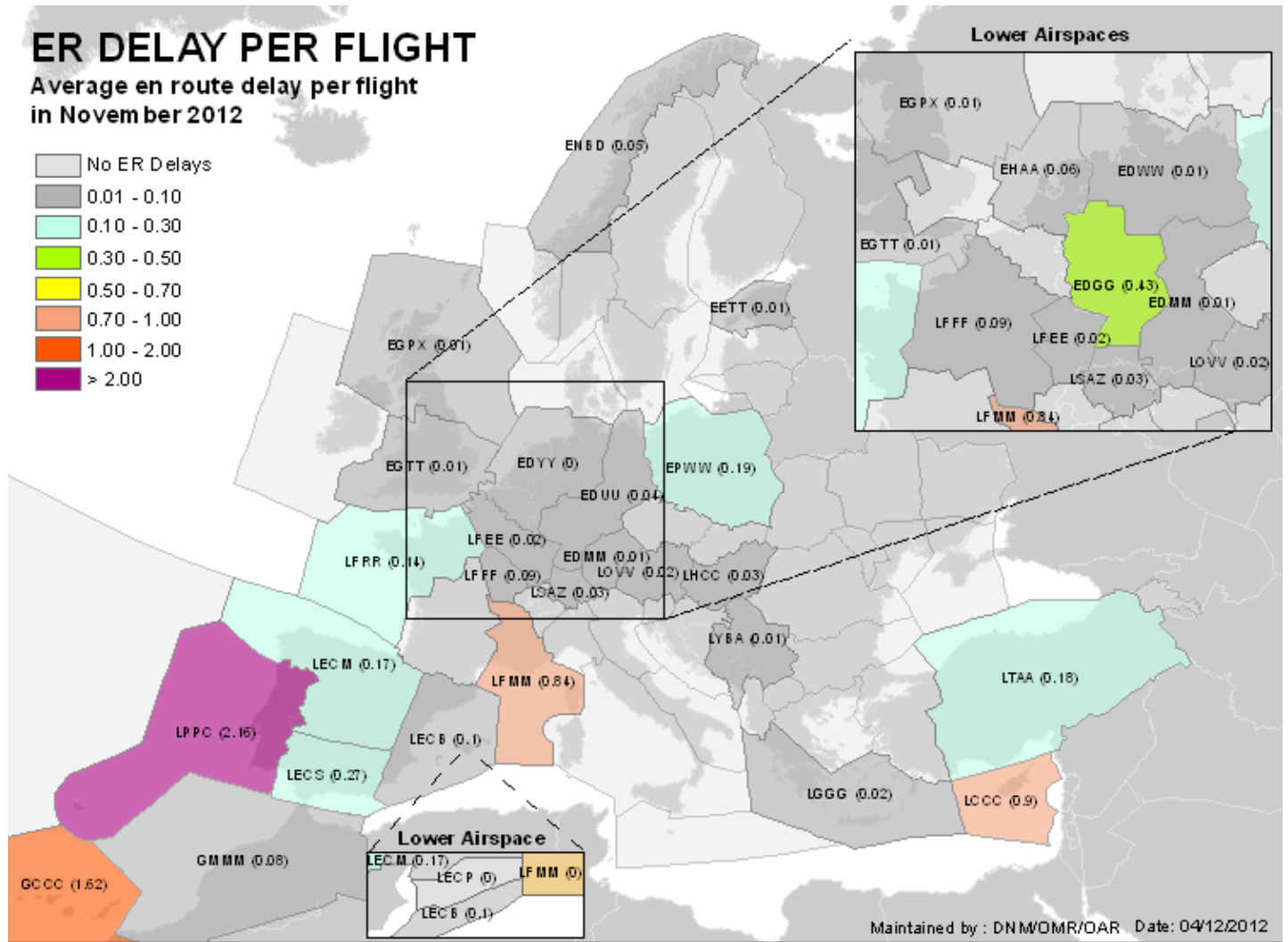
The en-route ATC disruption was mainly due to the French industrial action on 14-15 November affecting particularly Marseille ACC. Warsaw experienced frequency problems on the 7th, 9th and 13th November.

Average en-route daily flights >= 15 min delay



In November 2012, an average of 246 flights per day had an en-route delay of at least 15 minutes, which is a significant improvement compared to November 2011.

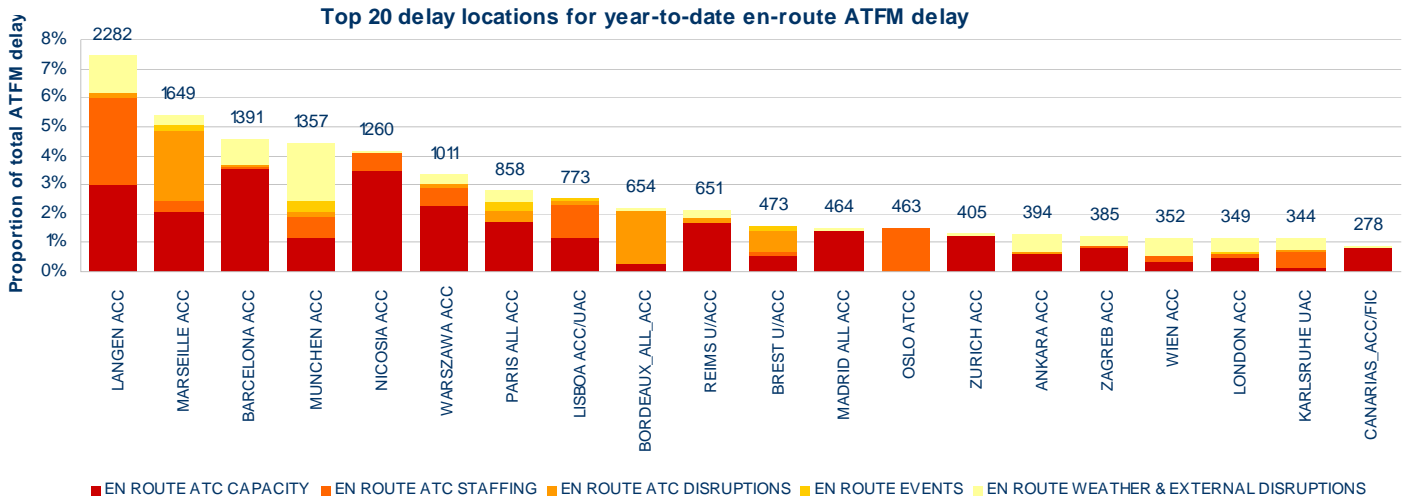
3.3. EN-ROUTE ATFM DELAY PER FLIGHT



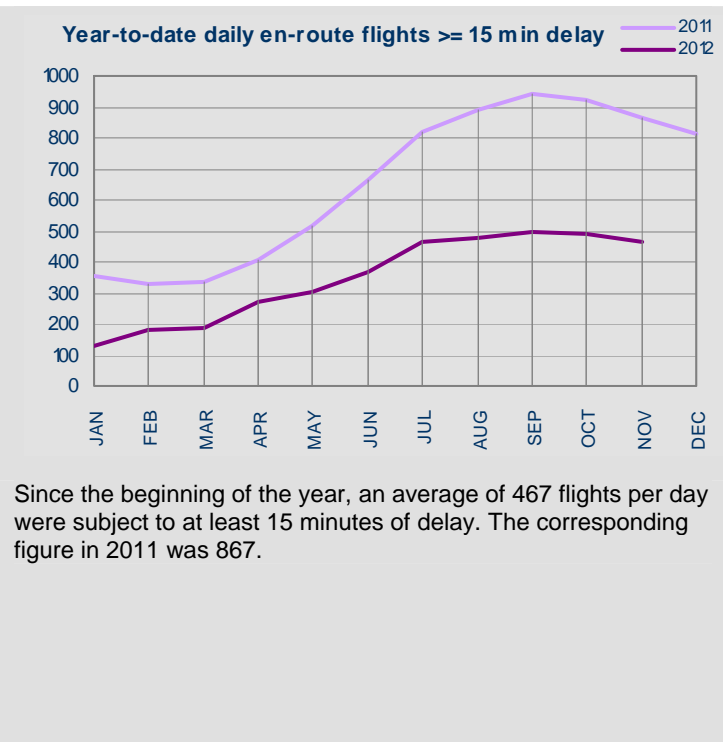
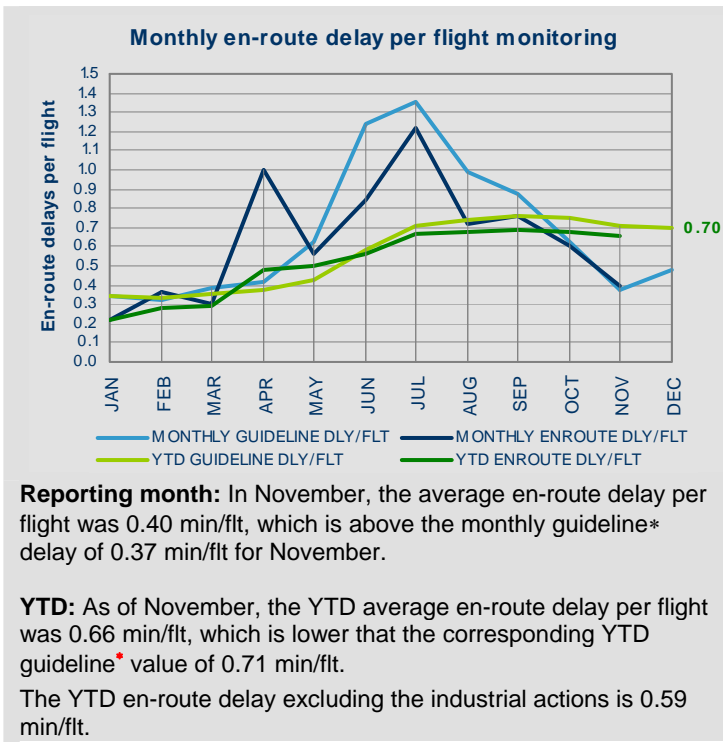
Lisbon ACC generated the highest average en-route delay per flight, mainly due to ATC staffing and capacity.

Canarias ACC generated the second highest average en-route delay per flight, mainly due to ATC capacity.

3.4. EN-ROUTE ATFM DELAY YEAR-TO-DATE



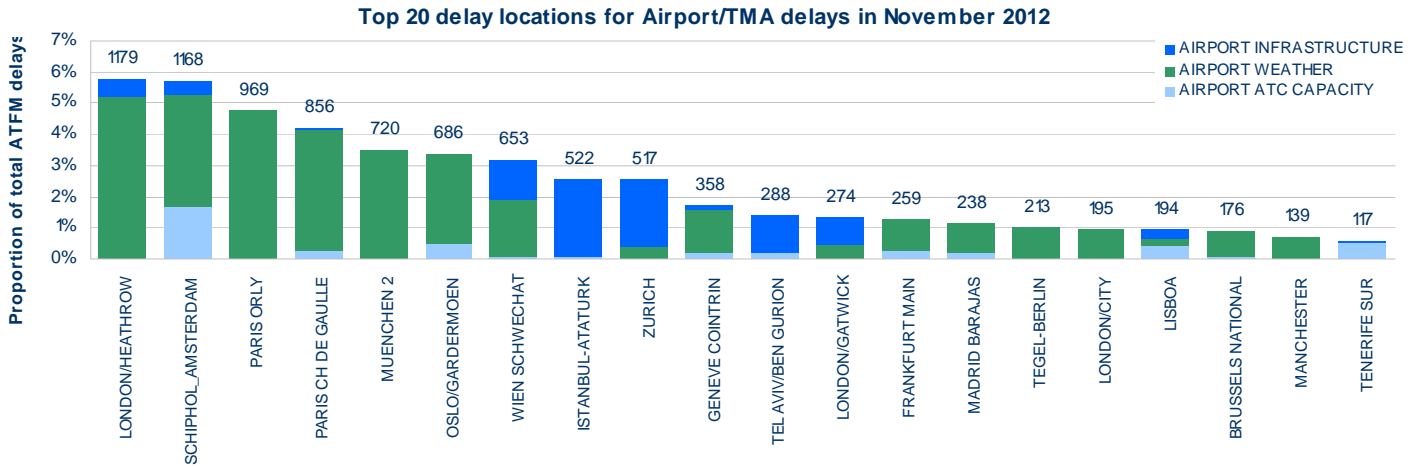
The top 20 en-route delay locations generated **52%** of the total ATFM (network) delay since the beginning of the year. The top 5 en-route delay locations generated **26.1%** of the total ATFM (network) delay since the beginning of the year.



*NM's calculation that provides the guideline en-route delay (min) requirements to achieve the annual target (0.70 min/flight).

4. AIRPORT/TMA ATFM DELAYS

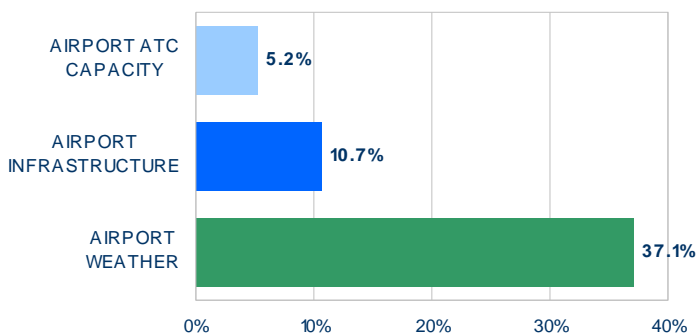
4.1. AIRPORT/TMA ATFM DELAY PER LOCATION



The top 20 Airport/TMA delay locations generated **47.6%** of the monthly total ATFM (network) delay. The top 5 Airport/TMA delay locations generated **24%** of the monthly total ATFM (network) delay.

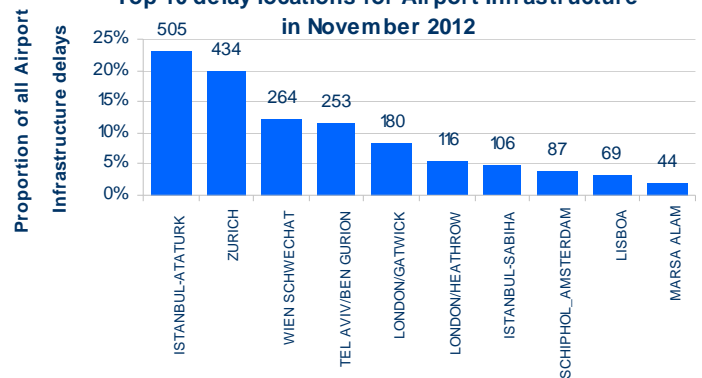
4.2. AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for Airport/TMA delays in November 2012



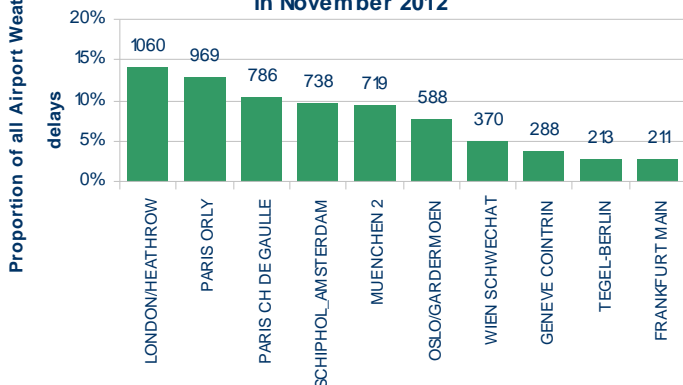
Airport/TMA delays accounted for 53% of all ATFM delays, mainly due to Airport Weather.

Top 10 delay locations for Airport Infrastructure in November 2012



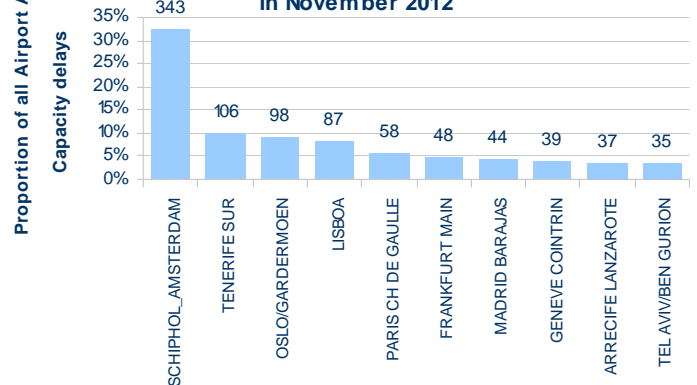
Limitations to optimum runway configurations at Zurich airport (due to environmental constraints) and at Istanbul Ataturk airport (due southerly winds) continued to cause significant delays. Runway configuration during recent security situation caused delay at Tel Aviv/Ben Gurion.

Top 10 delay locations for Airport Weather in November 2012



Delays at London Heathrow, Paris Orly, CDG and Munich were mainly due to strong winds, fog and low visibility. Amsterdam and Oslo had some snow and fog.

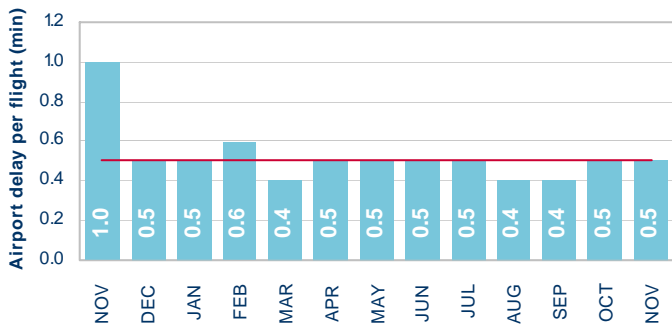
Top 10 delay locations for Airport ATC Capacity in November 2012



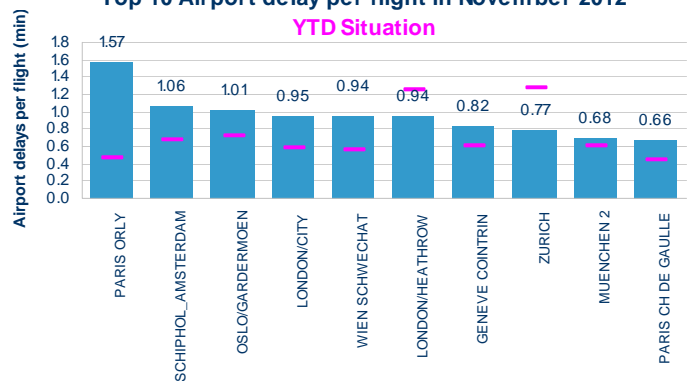
ATC capacity delays were mainly in Amsterdam airport.

4.3. AIRPORT/TMA ATFM DELAY PER FLIGHT

Monthly average Airport delay (min) per flight
Last 12 months = 0.5 minutes



Top 10 Airport delay per flight in November 2012
YTD Situation

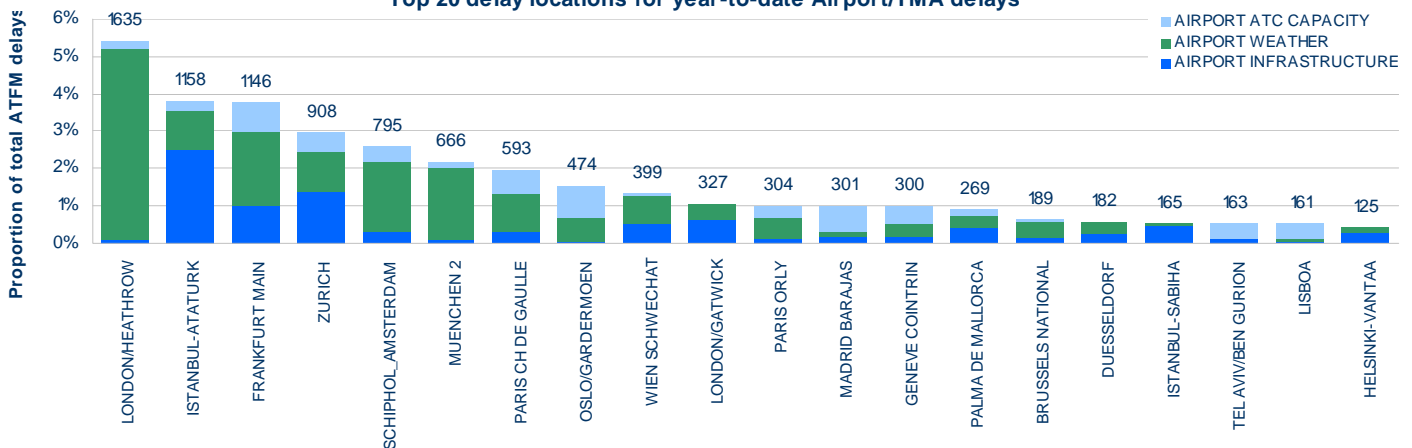


Average Airport/TMA delay per flight decreased from 1 minute in November 2011 to 0.5 in November 2012.

In November the top three airports with the highest delay per flight were Paris Orly, Amsterdam and Oslo airports.

4.4. AIRPORT/TMA ATFM DELAY YEAR-TO-DATE

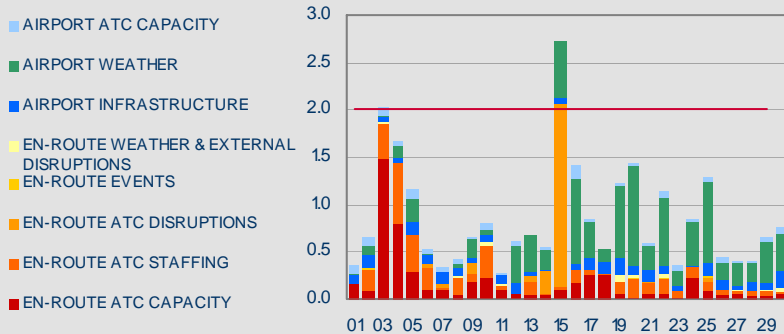
Top 20 delay locations for year-to-date Airport/TMA delays



The top 20 Airport/TMA delay locations generated **33.8%** of the total ATFM (network) delay since the beginning of the year. The top 5 Airport/TMA delay locations generated **18.6%** of the total ATFM (network) delay since the beginning of the year.

5. DAILY EVOLUTION

Average delay (min) per flight in November 2012



In November 2012, there were 2 days with an average delay per flight at or above 2 minutes:

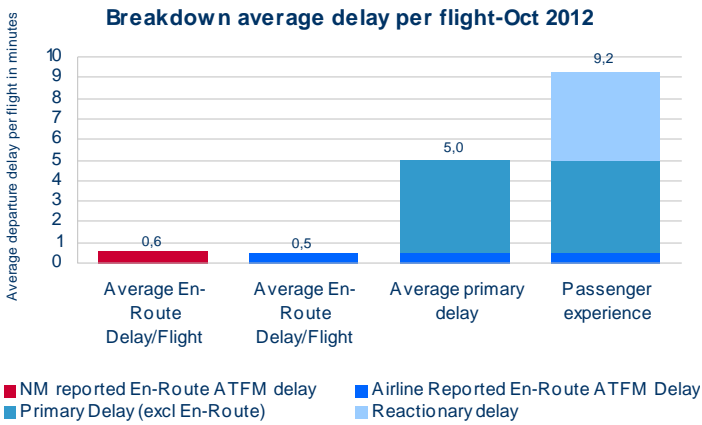
Sat 3rd Nov: The network was dominated by en-route ATC capacity delays in Canarias, Sevilla, Madrid, Barcelona and Brest ACCs. Some of this delay was due to traffic avoiding Lisbon ACC, which had en-route staffing delays (16% of all the network delays).

Thu 15th Nov: 71, 5% of the Network delay was caused by the industrial action in Marseille ACC. The second main reason for delay was bad weather condition (fog) at Geneva, London City, Amsterdam and London Heathrow airports. Langen ACC also recorded significant en-route ATC capacity delays.

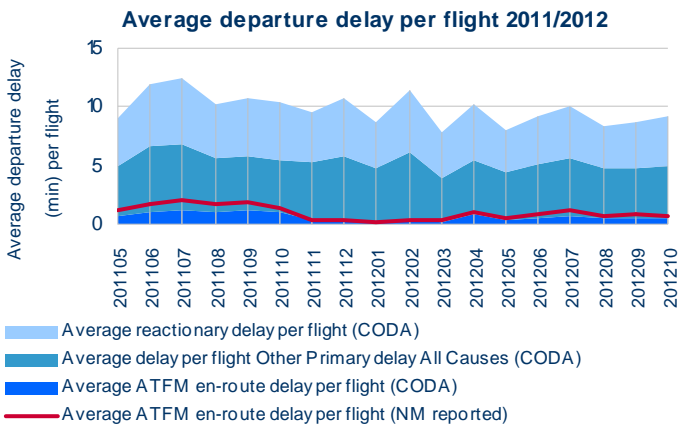
6. ALL AIR TRANSPORT DELAYS (Source: CODA)

The analysis below is based on airline data provided to CODA by airlines (AO's). As the airline data collection for November 2012 is not yet complete at the time of writing, this analysis covers the latest available 13-month period (October 2011-October 2012) and contains details on 64% of commercial flights in the ECAC region.

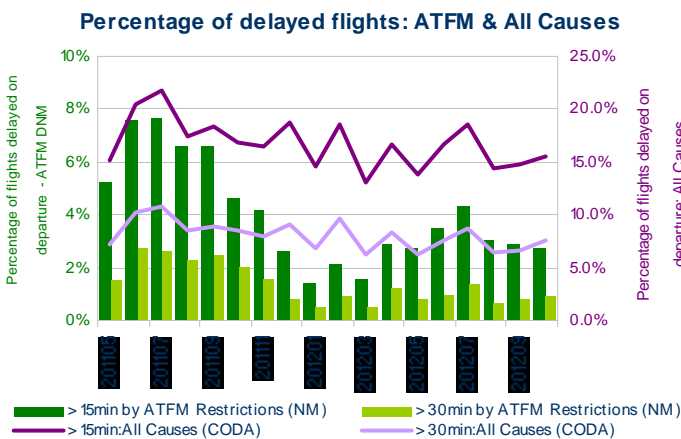
ATFM delays reported by airlines are often lower than the ATFM delays calculated by the network manager (NM). ATFM delays of NM are the (flight) planned "delays" whereas the airlines report the "actual" experienced ATFM delay on departure. For instance, a flight with an ATFM delay may also have a handling delay absorbed within the ATFM delay. For the airline, a part of this delay is the ATFM delay and the rest is the handling delay.



Airline reported en-route ATFM delay in October 2012 was 0.5 minutes per flight which is slightly lower than the NM reported average en-route ATFM delay of 0.6 minutes per flight. As airlines may assign multiple delay reasons for a delayed flight, some of the en-route ATFM delay may be attributed to other reasons if the other reason prevented the flight from obtaining a slot improvement. A common example is a NM reported en-route ATFM delay reported by airlines as a split between reactionary and en-route ATFM delay. According to airline reporting, in October 2012 the average delay per flight for all-causes of delay was 9.2 minutes. The primary delay share of total all-causes delay was 54% (or 5.0 min/flight) of which en-route delays contributed 0.5 min/ft. The remaining were Reactionary delays, this counted for 46% or a contribution of 4.2 min/flight.

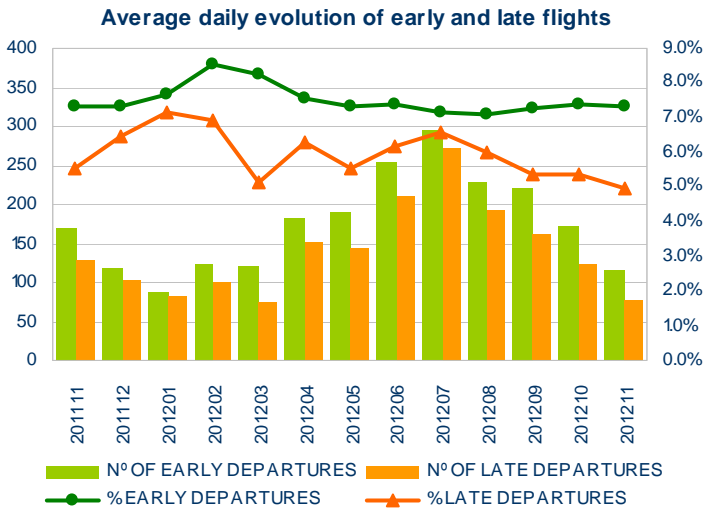


Based on airline data, the reported share of reactionary delay minutes in October 2012 was 46%. Both NM and airlines reported that en-route ATFM delays were below 1 minute per flight at 0.6 min/per flight and 0.5 min/per flight respectively.



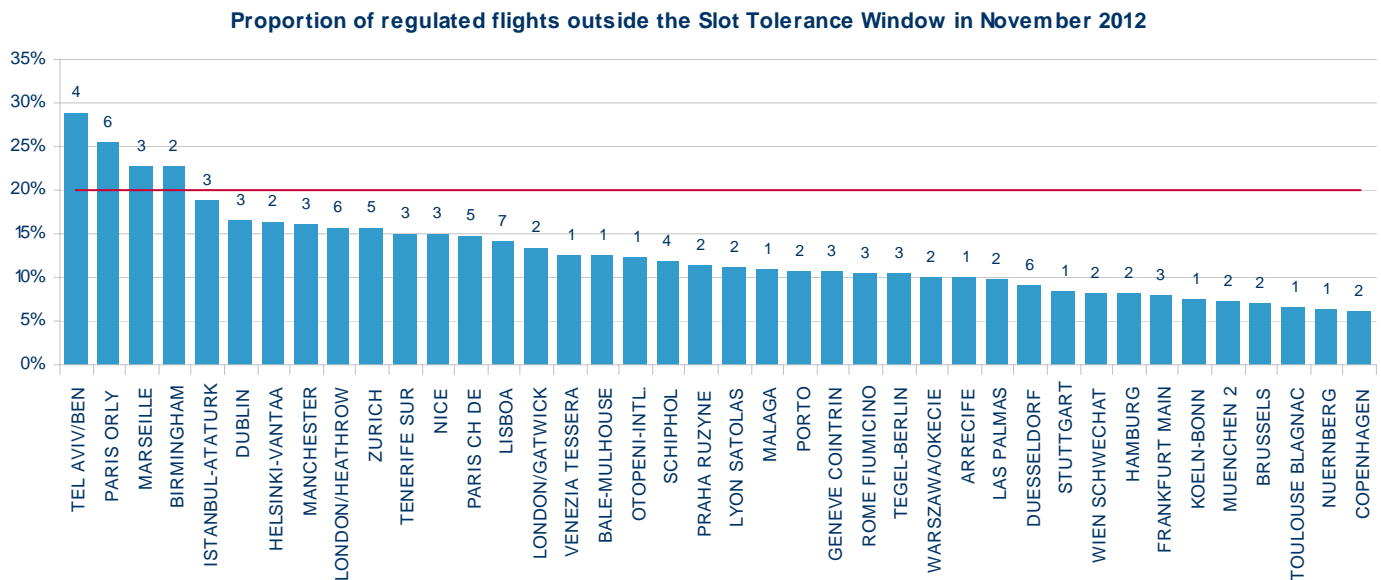
The percentage of flights delayed by long ATFM restrictions (those exceeding 15 minutes and 30 minutes) remained at the same level in October 2012 when compared to September 2012. The percentage of flights delayed from all-causes (those exceeding 15 & 30 minutes) decreased both month-on-month and year on year.

7. ATFM SLOT ADHERENCE



In November the percentage of late non-compliant departures has further improved. The percentage of early departures has remained stable. Although the overall percentage of traffic departing within their Slot Tolerance Window (STW) is above the target (at least 80%), there are many airports for which compliance can be improved. Following the general seasonal trend the absolute numbers of flights departing outside the STW has decreased. Compared to the same period in 2011, the absolute figures show an overall improvement.

The chart below shows the top 40 airports that have more than 300 regulated flights during the month with their average daily number and proportion of regulated flights that departed outside of the STW. Any airport above the red line is non-compliant with the ATFM slot adherence target (min 80%) and non-compliant departures from Tel Aviv/Ben Gurion, Paris Orly, Marseille and Birmingham airports have wider network impact.



8. SIGNIFICANT EVENTS AND ISSUES

8.1. PLANNED EVENTS

The significant events planned for the month of November 2012 were mainly related to training for new ATM systems, to be deployed in the coming months. The training took place in: Vienna ACC, Budapest ACC, Chisinau ACC, Warsaw ACC and TMA, Bratislava ACC, Ljubljana ACC, Stockholm ACC. In all cases NO reductions in sector capacities were originally foreseen. Other events were shadow mode operations in Munich ACC and Karlsruhe ACC (estimated Low impact on Network operations despite sector capacity reductions of 10-20% and 25% respectively); Bratislava ACC (estimated Low impact on Network operations and no sector capacity reductions).

8.2. DISRUPTIONS

- **European general day of industrial action on 14 November:** Estimated 1500 fewer flights localised in Spain, Portugal and France. No delay impact.
- **Industrial Action at Marseille ACC 15 November:** Caused 49,000 minutes of delay and an estimated 250 flight cancellations.
- **Tel Aviv/Ben Gurion airport between 17-23 November:** Capacity restrictions (limited opening hours and rate reductions) due to security situation in Israel. The situation had further ATC impact in Nicosia ACC.

8.3. OTHER CONSTRAINTS

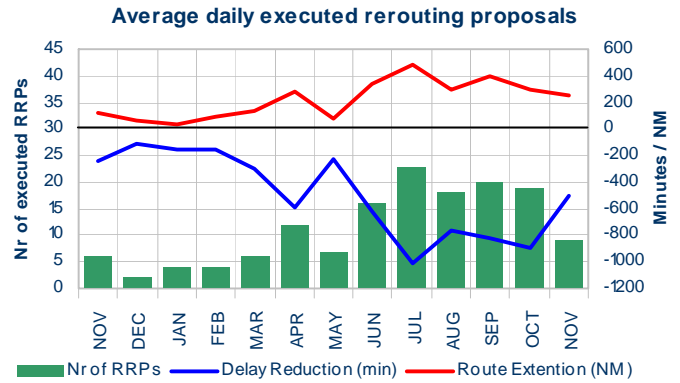
- **Staffing Issues at Lisbon ACC:** ATC Staffing levels at Lisbon ACC continued to be a problem in the course of November. As well as high delays in Portugal, this issue had consequences also in Seville and Madrid ACCs with the re-routed traffic avoiding Portugal.
- **Staffing Issues at Langen ACC:** Although the situation has improved since the last month, ATC staffing levels and the corresponding en-route delay at Langen ACC continued to be an issue also in November.

9. NM ADDED VALUE

9.1 RRP DIRECT DELAY SAVINGS

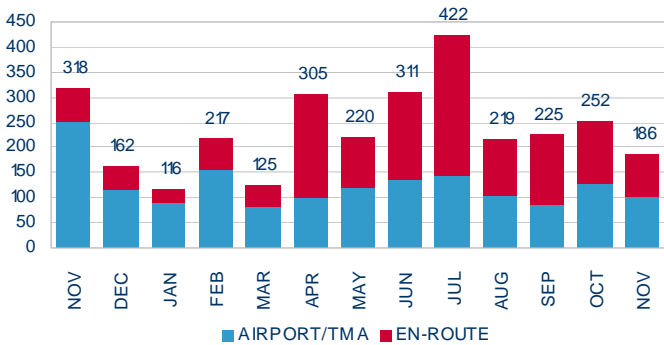
NM proposed alternative routes to an average of 18 flights per day of which 9 were accepted. This saved 505 minutes of daily delay at a cost of 246nm extra mileage flown.

This graph shows the actual daily averages for the previous 13 months period.



9.2 FLIGHTS WITH DELAY > 30'

Average daily flights > 30 minutes delay



Compared to November 2011, the number of flights that had more than 30 mins of ATFM delay decreased by 41.5% (318 flights/day in November 2011 to 186 flights/day in November 2012).

54.3% of the reduction was at airports.